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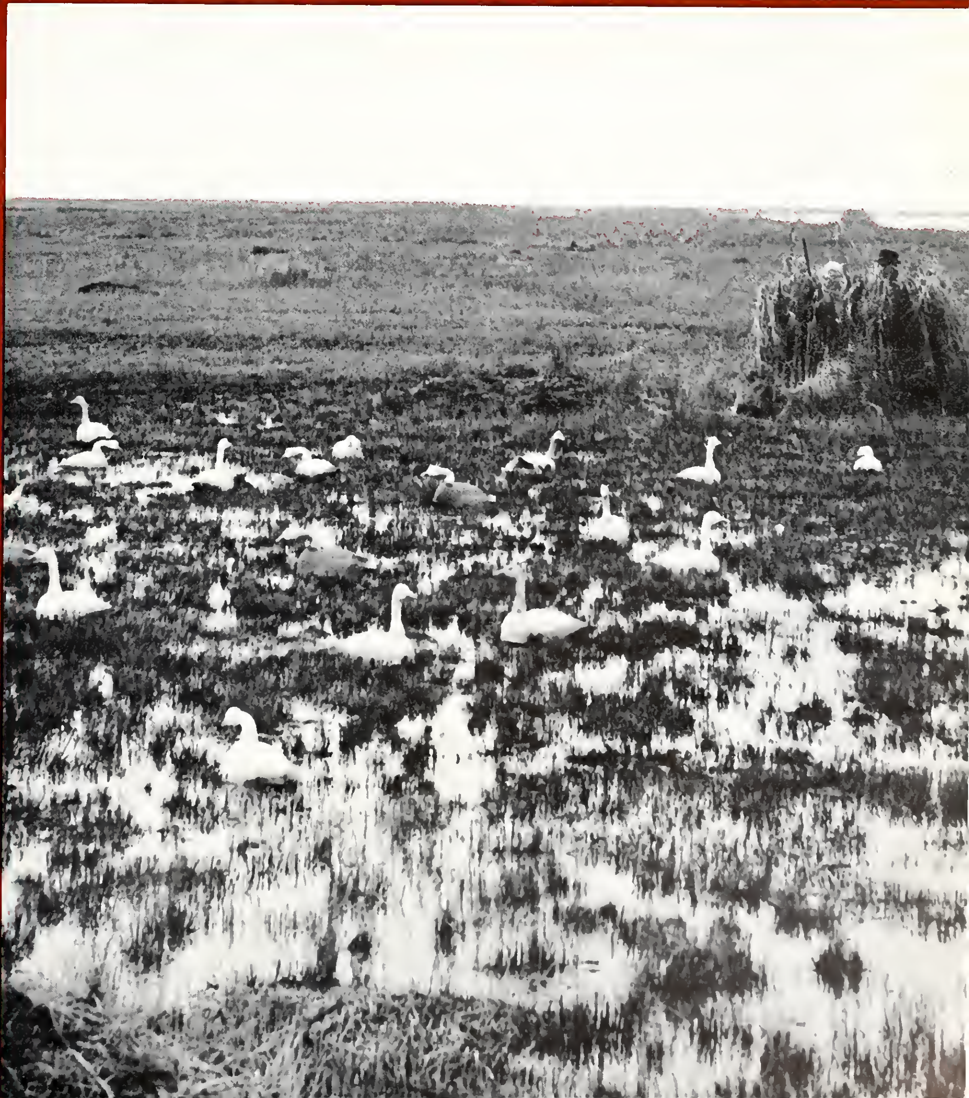
LOUISIANA Conservationist

LOUISIANA WILD LIFE AND FISHERIES COMMISSION

VEMBER
1961



Vol. 13 No. 11

November, 1961

Conservation Pledge

I give my
pledge as an American
to save and faithfully to
defend from waste the
natural resources of
my country—its soil
and minerals, its
forests, waters,
and wildlife

Published monthly except May, June, July and August when bi-monthly in the interest of conservation by the Louisiana Wild Life and Fisheries Commission, Wild Life & Fisheries Building, 400 Royal Street, New Orleans, La.

Front Cover—
With decoys out, goose hunters peek from their blind for the first glimpse of an approaching flight of geese. Although the number of Canada geese wintering in Louisiana has been cut to a tiny trickle, state goose hunters are able to hunt roughly 90 per cent of the Continent's blue goose population. Nothing has deterred the centuries-old migration of Blue and Snow Geese in the marshes and mudflats bordering the Gulf of Mexico. While the major populotion of geese wintering in Louisiana consists of Blues, flocks are sprinkled with Snow Geese. More waterfowlers are taking up goose hunting due to drastic cutbacks in both bag limits and the season on ducks.

LOUISIANA Conservationist

LOUISIANA WILD LIFE AND FISHERIES COMMISSION

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Governor

L. D. YOUNG, JR.
Director

R. K. YANCEY
Asst. Director

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Upon Written Request

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EDITORIAL

THE FINDINGS of the second National Survey of Fishing and Hunting in the United States, released in September by the director of the Bureau of Sport Fisheries and Wildlife, United States Department of the Interior, do not come as a surprise to those who have worked with wildlife and the administration of resources upon which hunting and fishing depend.

They are, however, of great importance in the planning for the future—a factor that has been important in all of the Commission's activities. Based upon compilation of statistics in 1960 and early 1961, it is reasonable to assume that even greater needs for wildlife administration and kindred activities outdoors will be necessary to satisfy our people.

The survey, which is conservative in many respects, revealed that fishing and hunting are among the Nation's most popular outdoor sports. In a broad sense, the pursuit of pleasure afield and afloat covers boating, archery, camping, skin diving, water skiing and a number of other recreational activities that are all hinged upon management of wildlife and natural resources.

We are living in a fast-paced age where men are probing space and have their sights on the moon. They are also probing the woods and waters in search of recreation. They also have their sights fixed on a stately buck and the bursting blast of a striking bass.

It is a strange paradox that space means the weightless nothing between planets, and simply a place to hunt or fish.

The second national survey which I refer to shows a large increase in the number of people who are dependent upon wise management of wildlife for their recreation and pleasure.

It reveals millions of participants who spend billions of dollars, hundreds of millions of days and travel billions of miles to enjoy hunting and fishing. Our people have turned in ever-increasing numbers to the healthful out-of-doors.

As industrial technology, automation and other advances have increased wages and shortened the work-week, the time and money available for recreation have contributed to this change. With this additional free time, a large proportion of our citizens go outdoors. The figures are astounding, except to those of us who are engaged in wildlife and other natural resources management work.

Fifty million of the 130 million people in the United States over 12 years old went hunting, fishing, or both in 1960. This is nearly 2 out of every 5 persons in this age group.

A detailed study of participation in these sports, including types of fishing and hunting, expenditures, mileage traveled and the like, was made of the more active sport fishermen and hunters, who for the most part, were licensed or, if unlicensed, either took part in these sports on several occasions or reported a moderate expenditure for these activities.

L. D. YOUNG, JR.
Director

The more substantial participants reported around 650 million recreational days of fishing and hunting, and an expenditure of close to 4 billion dollars on these pastimes. When compared with a similar survey conducted in 1955, the number of these sportsmen had increased by over 5 million and their expenditures by at least 1 billion dollars.

This puts the management of wildlife resources and key natural resources to an ever-growing acid test. It is up to us to meet that challenge and in order to do so, we must continuously expand our technological and managerial staff. We are not merely faced with the continued preservation of hunting and fishing resources. Statistics clearly indicate that we are faced with a growing utilization of those resources. We have not reached the peak of hunter-fisherman activities and it is doubtful that such a peak will ever be realized in a country that is always growing.

The proper course of action is clear. We must look forward constantly and gear our activities to meet the demands that will be made in future years by sportsmen who want space—not outer space—but space in which to pursue their inborn and natural desire for sport and recreation outdoors.

We can, and we are determined to meet this challenge. Doing so will call for conservation education, acquisition of uplands and marshlands, continued and expanded research, and a public information campaign that will reach the most remote, as well as the largest communities in Louisiana.

This is a program in which the public has the biggest stake; consequently, it must have public support and understanding. ✠

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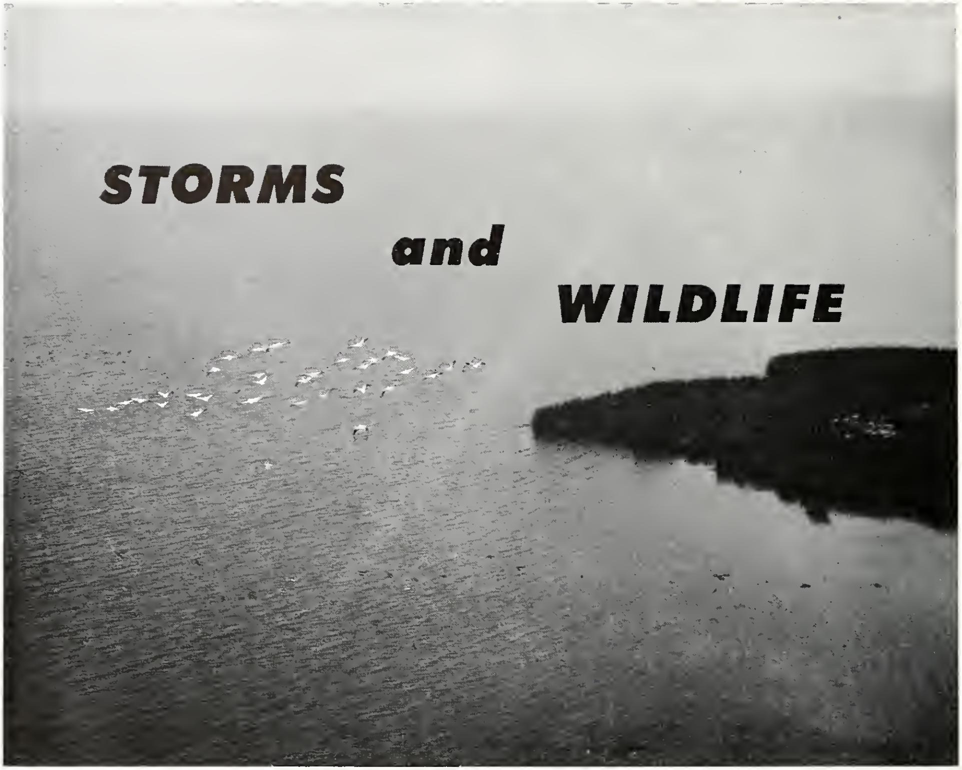
STORMS and WILDLIFE



These white pelicans seen in the air breed mostly in the North in inland lakes and their young are not subjected to storms. The very small specks on the water in the foreground are Louisiana brown pelicans seen near their rookery at North Island in the Chandeleurs. Early storms flood the island and kill off the young who are unable to swim or fly. This is said to be the cause of the dip in population of our State's bird.

Ednard Waldo

THE EFFECTS OF STORMS on wildlife may be measured in terms of destruction of property and loss of human and animal life, immediately after a hurricane. However, it may take many years to determine the effects of storms on the ecology of wild animal habitat.

The recent storm Carla left in its wake thousands of dead muskrat, nutria, rabbits, and other species on the commission's Rockefeller and Marsh Island (Russell Sage) wildlife refuges; it tore down man-made dams which keep brackish water impounded and has allowed the intrusion of salt water from the Gulf which is detrimental to the growth of grasses and roots essential to migrating and resident waterfowl, also nutria, rabbits and muskrat.

However, says assistant-director Richard Yancey, the man-made dams may be replaced, and the loss of one generation of animals isn't too important provided the dams and dikes are replaced and the ecology of the terrain maintained. This isn't always the case where state agencies aren't on hand to fix things back just as they were.

A possible case in point is the Chandeleur islands, the barrier reef of sand which protects the coast of Breton, Chandeleur sounds and part of Mississippi sound from the powerful waves of the Gulf of Mexico.

Behind this reef, part of which is a wildlife sanctuary in the relatively non-turbulent waters and in the grasses of its shallow water bottoms before the coming of Hurricane Audrey, pink shrimp, clams, scallops and redfish in countless numbers made their homes. The Chandeleurs, as a result of Audrey, have been cut into a string of nearly seventy little islands. This change in physiography has been unfavorable to the aforementioned marine life and so far few of these marine animals are to be seen in this locality. Will these animals return? No one knows the answer.

The effects in the change of ecology on the habitat of the famed Louisiana oyster is yet to be observed, but judging from what has occurred following past hurricanes there is no cause for alarm.

According to Dr. Lyle S. St. Amant, chief biologist for the Oysters, Water Bottoms and Seafoods division of the commission, the effect of weather on oyster production is not dramatic or easily evaluated except in cases of catastrophies such as hurricanes and extreme droughts.

During the past several years Louisiana's oyster producing area has felt the force of several violent hurricanes. Oyster beds were examined after each one to determine if damage had occurred. The results of such studies indicate that widespread damage did not occur. In local areas wave action silted up some beds and actually piled up oysters or washed them away from the beds.

Of more widespread occurrence was the effect of extreme tides which flood the marshes and upon receding float great amounts of dead marsh grass into the various bays where it sinks and covers oyster beds. Fortunately, so far, no serious mortalities have resulted from this condition which is also expected to ensue as an aftermath of our last hurricane, St. Amant says.

"Hurricanes, short term temperature changes, and long hot summers have had a deleterious effect upon oysters. Hurricanes and freezes also affect shrimp. However man-made changes in the ecology of this part of the country are the most serious," says James N. McConnell, chief of the division.

"One does not have to be an expert to fly over our coast and see how drastically industrial expansion has changed the characteristics and ecology of the coast. It is all too obvious that large areas, once oyster producing, have been physically usurped by oil fields. Canals and spoils have changed currents, causing silting of bays from normal sediment and have changed the mean salinities. Pollution from industry is still prevalent and accumulative," McConnell says.

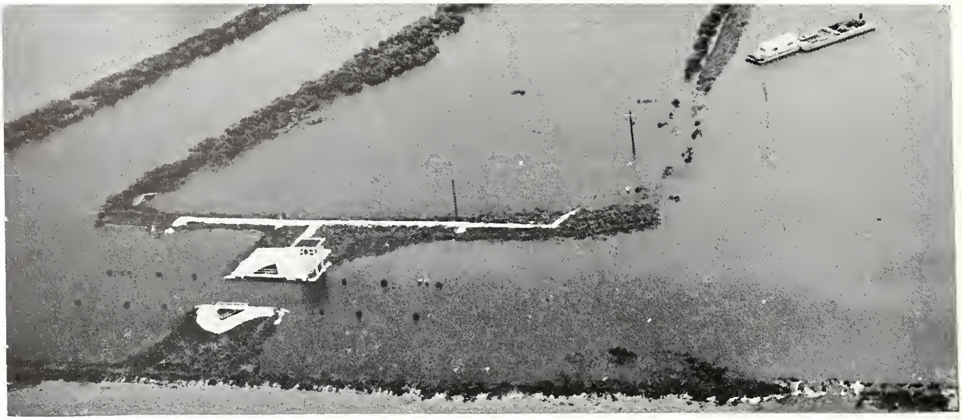
To return to the fur bearing animal situation as the result of hurricanes, fur division chief Ted O'Neil points out that peak muskrat populations have occurred after some catastrophies such as the severe hurricane of 1915 or the drought of 1924. Presumably such catastrophies kill off most of the rat population and much of the dominant vegetation, mainly wiregrass, is eliminated by high salt tides. This allows the preferred three-cornered grass to dominate most of the marsh before the muskrats have come back in sufficient numbers to control it. The rat population, with this generous food supply, increases rapidly until incredible densities are reached. Then, of course, they eat themselves out of food and the population crashes and the cycle begins all over again. More hurricanes, more three-cornered grass, more rats.

As a result of hurricanes, Louisiana could be threatened with extinction of its state bird, the Brown Pelican. The three Louisiana brown pelican rookeries, on the mud flats of the mouth of the Mississippi, at Timbalier Island and at North Island in the Chandeleurs have been severely ravished by early storms and hurricanes when the young were nesting. The brown pelican nests about two feet above the marsh. In an early storm when the waters cover North Island, Timbalier and the Mississippi mud flats, the older birds escape, but the featherless young, unable to swim or fly, die. A succession of such storms has cut the brown pelican's numbers severely.

L. D. Young, Jr., director of the Louisiana Wild Life and Fisheries Commission, has revealed a rough estimate of damage done to the state's coastal wildlife refuges during Hurricane Carla.

Young, accompanied by Assistant Director Richard Yancey, made a complete aerial reconnaissance of commission-managed wildlife refuges in south central and southwest Louisiana

This deer, along with many others, including uncountable snakes availed themselves of any high place when the waters covered the Marsh Island game refuge during and after hurricane Carla. This scene is in the boat house at Marsh Island.



Above is seen one of the water locks at the Rockefeller refuge. Note at right and in other places where Hurricane Carla has broken through the levees allowing intrusion of salt water into the impoundments. The lock is open to allow the salt water to escape back to the sea. Later they will be closed and the levees repaired.

checking upon installations, equipment and impoundment levees.

"It is still too early to accurately estimate the water damage done to the state's wildlife refuges," he said, "however, the damage to the levees certainly exceeds $200,000 and possibly will run higher after the water recedes."

Young pointed out that additional damage to levees on the refuges can be anticipated due to rapid drainage of water from the impounded areas through breached levees.

Of the two major refuges inspected by air and also on the surface during the inspection flight, Rockefeller Wildlife Refuge in Cameron and Vermilion parishes appeared to have had the most flooding. It was covered with from seven to eight feet of water during the height of the hurricane-caused flooding.

Aerial reconnaissance revealed that several of the levees at Rockefeller had been breached; however, the camps and buildings which had been rebuilt after Hurricane Audrey in 1957 were not damaged.

At Marsh Island, flood waters were between five and six feet, also causing damage to levees. There, too, buildings and boat houses remained undamaged.

Young and Yancey made the inspection flight aboard a commission-owned Widgeon amphibious airplane, landing at intervals in canals to wade ashore and personally inspect the damage.

Young said that throughout the hurricane period, between 250 and 300 commission personnel remained on continuous duty, protecting equipment' installations and wildlife; as well as assisting in evacuation of people from the flooded areas and rescue of stranded cattle.

"Our enforcement division and other personnel, as well as commission-owned boats and airplanes, were shifted quickly into areas where they could perform the most assistance to both people and wildlife," he said.

In reporting on possible damage to wildlife, Yancey revealed that destruction of birdlife was not as great as it would have been if the hurricane had come earlier in the year.

"The nesting period was over and waterfowl and other birds were able to flee the storm, thus cutting down sharply on possible destruction of birds by the storm," he said.

Many deer sought high ground and refuge during the peak of the flooding that came during and after the hurricane, Yancey said. Deer and other game seeking the protection of the levees and other high ground were protected from game violators by fast-roving wildlife agents.

The major damage in the coastal areas to wildlife was caused among the rabbit, muskrat and nutria populations. The extent of this damage cannot be fully appraised yet. However, it is believed that destruction of wildlife was much lower than had been anticipated during the approach of the storm.

"Many of the water control structures in the game refuges were still under water during the inspection trip and the full extent of damage to those structures must wait until later for more complete estimation," Yancey said.

Full effect of the storm on the alligator population at Rockefeller Refuge could not be determined at time of the inspection, he said.

Rockefeller Refuge is believed to have the largest concentration of alligators left in the state. Yancey estimated that destruction of the alligator population, or movement of alligators from refuge boundaries as a result of flooding would not be as great as it was during Hurricane Audrey.

Continuous inspections of the refuges will be made and repairs will be expedited, Yancey said.✠

BIRDS OF WORLD HOUSED AT LSU

Dr. Robert J. Newman, curator of the LSU Museum of Natural Science, catalogues the museum's 25,000th bird specimen, the Oaxaco sparrow. Only ten such specimens of the bird are in museum collections.

THE MUSEUM OF ZOOLOGY, the research division of the LSU Museum of Natural Science, has catalogued its 25,000th bird specimen!

The 25,000th specimen was obtained this summer by graduate students in Mexico. The bird is the Oaxaco sparrow, which has a very restricted habitat. Only ten appear in the museum collections.

The collection was begun in 1936. Six dusty old skins of unknown origin found in a cabinet in the basement of Audubon Hall formed the nucleus of what is now one of the largest assemblages of bird specimens in any university museum in the country, said Dr. Robert J. Newman, Curator of the Museum.

The collection contains specimens from many corners of the world. The best representations are from the United States, Mexico, and Central America. An expedition was made to New Zealand and Australia last year and the museum now has an expedition in Kenya.

Of the 169 families of birds in the world, the LSU Museum has specimens of all but 20. Examples of at least four of these 20 should be obtained this summer on the Kenya expedition—the Whale-billed Stork, a heronlike bird with a grotesque bill; the Secretarybird, a bizarre, long-legged, snake-eating hawklike bird; several species of Guineafowl; and the Crabplover, a shore bird found in East Africa and on the borders of the Red Sea and Indian Ocean.

The collection contains many rarities, birds that are now extinct or nearly so—the Ivory-billed Woodpecker, Passenger Pigeon, Carolina Parakeet, Trumpeter Swan, California Condor, Attawater Prairie Chicken, and Eskimo Curlew. These rarities were obtained by gift or exchange.

Each specimen in the collection is accompanied by full information as to when, where and by whom it was obtained, its sex as determined by dissection, its probable age based on the degree of ossification of the bones of the skull, and, in most cases, the color of its unfeathered parts recorded immediately after death and before the onset of fading.

Such specimens when stored in the Museum's special storage cabinets, where they are protected from the ravages of insects and from the fading effects of light, will retain indefinitely their natural colors and utility for scientific study. The oldest specimen in the LSU Museum, one that was received in an exchange with another museum, was collected more than 100 years ago and is still in perfect condition.

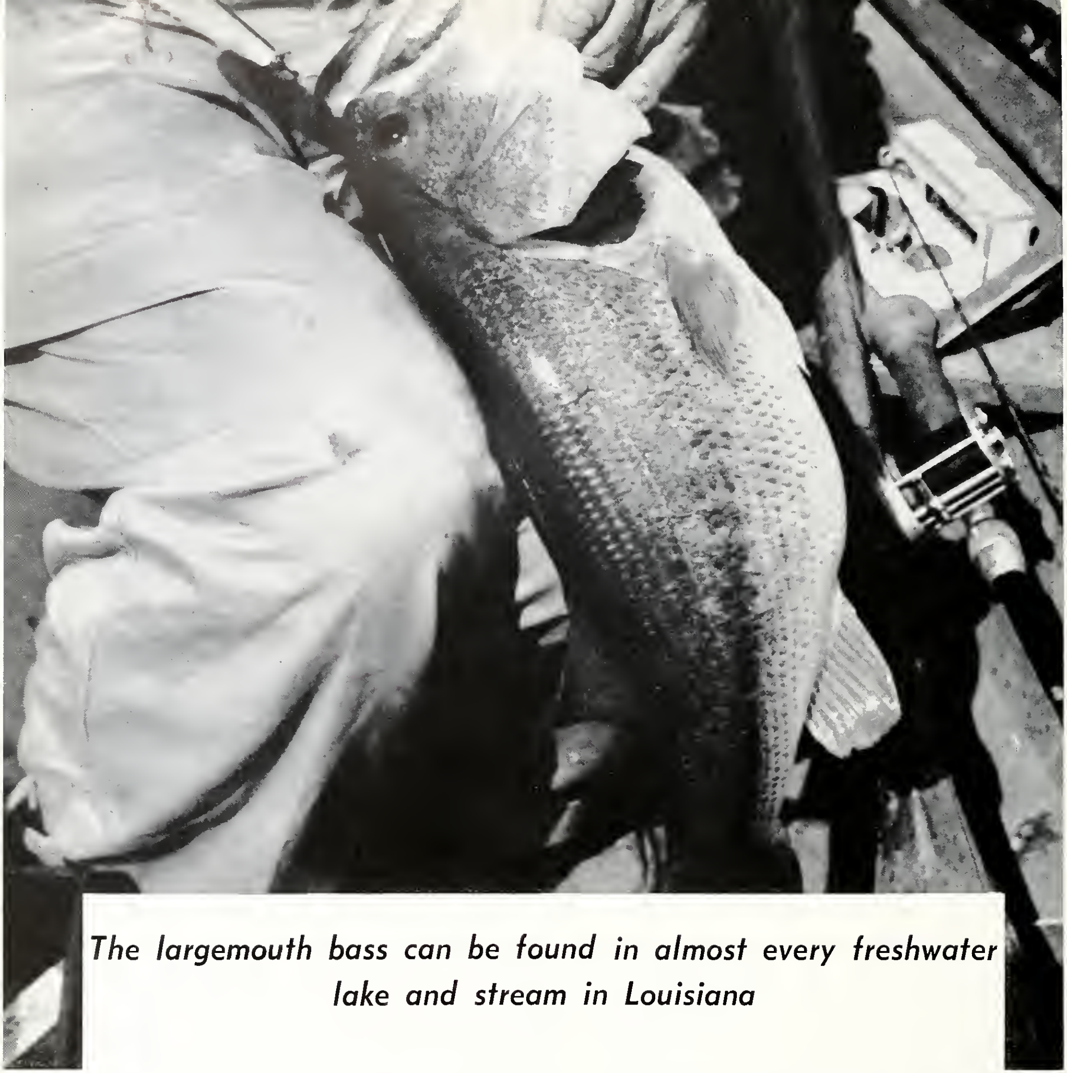
These specimens provide the basis for working out the details of distribution of species, for determining the range in individual, seasonal, sexual, age and geographic variation in species.

Many Master's theses and doctoral dissertations of students of zoology have been based on these collections, Dr. Newman reported. Four graduate students in zoology recently returned from four months of intensive ornithological investigations in southern Mexico, bringing home over 1200 specimens of birds. Two of the students, Delwyn G. Berrett and Edward Armstrong, worked in the state of Tabasco and the other two, Laurence G. Binford and Larry Wolf, in the state of Oaxaca.

Dr. Newman explained that even students who are engaged in studies of parasites, anatomy, genetics, or any of the other branches of zoology, have need to refer to the Museum's collections to verify the identification of the material on which they are working.

Some recent outstanding accessions include a large selection of birds from Nigeria, in West Africa, and a varied assortment of birds from Western Europe. Both of these collections were obtained by exchange, a practice carried on with museums in other parts of the world. From time to time the Museum has also received the gift of collections from former students and from others interested in its growth and development. The majority of its specimens were, however, obtained by members of the Museum staff or by graduate students working under the staff's direction.

In addition to birds, the Museum's research collection contain over 8000 mammals, 7000 reptiles and amphibians, and an equally large aggregation of fishes. These collections have formed the basis of numerous technical publications that have appeared in the Museum's own series and in various scientific journals. ✠



The largemouth bass can be found in almost every freshwater lake and stream in Louisiana

THE COLOR of the largemouth bass is variable, but usually is dark green on the back, lighter on the sides, and mottled with darker splotches. There is usually a dark streak along the side of the body, consisting of irregular patches, but this is less distinct in older fish. The belly is almost white, or greenish-white. The dorsal fin is almost divided by a deep notch reaching nearly to the base of the fin, and the upper jaw extends past the rear of the posterior margin of the eye when the mouth is closed.

These last two features help separate the largemouth from the spotted bass, the only other species of bass found in Louisiana since there are no true smallmouth bass in the state. In the spotted bass the dorsal fin is not notched as deeply, and the upper jaw does not extend past the eye.

The average size of bass caught in Louisiana would probably be less than two pounds, but they do grow much larger. The state record was only about eight pounds as recently as the late 1940's, but that figure has risen greatly in the past decade. The current Louisiana record is a bass which weighed 11 pounds, 11 ounces, which was taken from a stock pond in Washington parish on November 16, 1958.

Quite a number of unusually large bass have been caught in the Florida parishes in recent years, in addition to the top fish. One other, caught in March of 1959, weighed an even 11 pounds. Much larger bass are taken in other southern states and in Florida, and the world record largemouth of 22¼ pounds was caught in 1932 from Montgomery Lake, Georgia.

Habits of the largemouth bass can best be described as "unpredictable", but there are many things about the fish which we know. They spawn in the spring in Louisiana, when the wa-

Largemouth Bass

A "Prince" of a fish every month of the year

Grits Gresham

ter temperature reaches 68-72 degrees. The female lays from 2,000 to 15,000 eggs in a shallow water nest that is simply a circular depression on the lake bottom which has been fanned out by the male fish.

The eggs are enveloped in a glutinous mass when they are laid, and sink to the bottom where they become glued to rocks, sticks, and other debris. They are fertilized by milt from the male fish as they are laid.

The eggs hatch in from six to ten days, and the fry rise over the nest as a school and remain in the area for a week or so. In Louisiana the spawning season may run from February on into the middle of the summer, depending upon the section of the state and the temperature of the water.

Newly hatched bass feed upon minute water animals, changing their diet as they grow in size to small insects, larger insects, and finally small fishes. Adult bass feed primarily on other fish and on crawfish, but they will take almost anything that happens to be in the water. Among the creatures which have been found in bass stomachs are birds, snakes, frogs, rats and mice, and muskrats. Bass feed both at night and in the daytime.

Bass do not hibernate in Louisiana, but their body functions slow down as water temperatures go down. They do not, therefore, feed as often or as extensively in cold weather as they do in the warmer periods.

Bass are not generally thought to be "school" fish after they reach adult size, but there has been substantial evidence in recent years that they do gather in large groups.

The original range of the largemouth bass included all of the United States east of the Rockies with the exception of the New England states and the Atlantic seaboard of the middle states, and also included Ontario, Canada and eastern Mexico. It has now been introduced and established in every state. In Louisiana largemouth bass are found in every parish, and in

Because bass are highly prized for their fighting spirit they ring the cash register in the sale of more fishing equipment than any other game fish.

Record Louisiana largemouth bass (11 lbs., 11 oz.) caught in farm pond by Elwin Husser of Franklinton.

just about every body of fresh water in the state.

Largemouth bass are adaptable to many types of water—fresh or brackish, murky or clear. They are found in Louisiana in the brackish ponds and bayous of our marsh, in the clear-running streams of the state, in the artificial impoundments, in the borrow pits along our levees, in the oxbow cutoffs of our major rivers, in the overflow swamplands, and in thousands of farm ponds.

Although bass will thrive in lakes and ponds which are free of logs, stumps, and weed beds, they will use these places, when they are present, as lairs from which to pounce upon forage fish.

In sections of Louisiana the largemouth bass is called "trout" or "green trout". Whatever the name he goes under, however, more fishing tackle is sold with his conquest in mind than for any other species of fish. This is true in Louisiana, and in most of the rest of the nation.

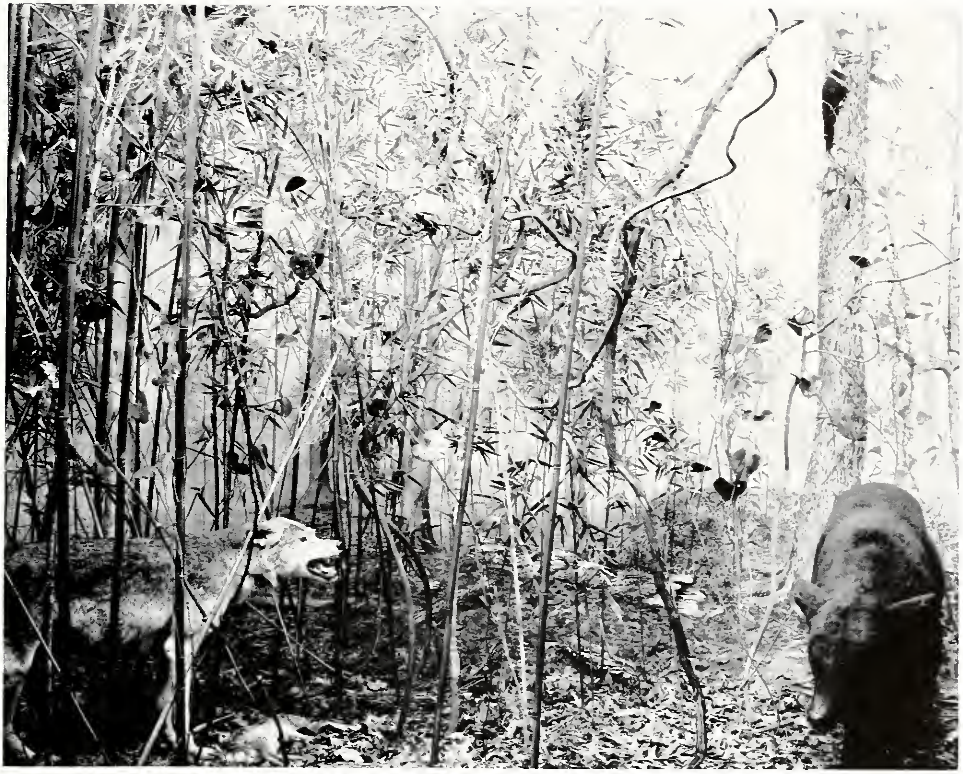
Tens of thousands of dollars are spent in this state each year for artificial lures, rods, reels, live bait, boats, motors, gasoline, landing nets, fish stringers, ice boxes, ice, and the myriad of other tackle items which lure fishermen. The livelihood of thousands of Louisianians who market the above products, or who operate boat landings, is closely tied to the fortunes of the largemouth bass.

Bass fishing undoubtedly adds several million pounds of highly palatable and nourishing food to the tables of Louisiana each year, in addition to contributing millions of man-hours of pleasure and contentment to Louisiana residents.

There are no closed seasons nor size limits on bass in Louisiana, since fisheries biologists have found that the high reproductive rate of the fish can more than cope with the sport fisherman's efforts. There is a daily creel limit of 15 bass, and the taking of this fish is limited to sporting methods—rod and reel or hook and line.

Management measures which the Louisiana Wild Life and Fisheries Commission uses include: 1. Enforcement of creel limits and the methods-of-taking provisions; 2. Enforcement of provisions against the sale of game fish; 3. Lake renovation when fish populations become unbalanced in favor of rough fish species (by total or selective poisoning or seining and netting, plus re-stocking); 4. Stocking of new lakes and ponds; 5. Providing technical help in planning or managing private or public fishing lakes; 6. Regulation of commercial fishing; 7. Spraying of water hyacinths to control them, without which treatment they would completely cover many fishing lakes; 8. Fluctuating water levels to control submergent aquatic vegetation, to control overabundant forage fish species, and to increase fertility of lakes; 9. Continual work toward pollution control and abatement. ✠

The thrill of the outdoors comes alive with each leap of the black bass.



Canebrake Exhibit Completed At LSU

A NEW EXHIBIT entitled "The Border of a Louisiana Canebrake" has been displayed at the LSU Museum of Natural Science, completing a series of three scenes depicting Louisiana of long ago.

The exhibit is dedicated to the memory of Jesse L. Webb, Jr., former mayor-president of East Baton Rouge Parish. Funds for the exhibit were donated by friends of the University who wished to honor the former civic leader.

Webb, elected as the second mayor-president of the parish in 1952 at the age of 29, was killed in a plane crash near Lansing, Mich., on April 28, 1956.

"He was an outdoors enthusiast, so it is most appropriate that this exhibit be dedicated to his memory," said Dr. George H. Lowery, Director of the Museum.

Museum curator P. A. Daigre, who designed and was responsible for the execution of the exhibit, said that the three special scenes from Louisiana's past preserve for present and future generations a small segment of the wild America which pioneers and early settlers found in great abundance.

The new exhibit depicts a canebrake scene located in Tensas Parish and is typical of those found in Louisiana many years ago. Prominence is given to a timber wolf and a black bear, both of which are still found in various parts of the state today. The timber wolf, standing over a freshly killed rabbit, is assuming an aggressive attitude toward the bear.

The animals are shown within the canebrake, a thick undergrowth of wild bamboo which serves as the understory of the forest.

The exhibit also shows two species of birds, the Carolina parakeet and the passenger pigeon, which are now extinct. The Carolina parakeet, once common in Louisiana but extinct since 1900, is represented by a mounted specimen. A flock of passenger pigeons, which were tremendously abundant before their extermination, is painted in the background.

Emphasis is also given to the pileated woodpecker, which is similar to the extinct Ivory-billed woodpecker.

The other two scenes of the three-exhibit display have been completed for some time. One of these exhibits depicts the whooping crane and the prairie chicken in their natural habitat. The whooping crane is virtually extinct, with only

(Continued on page 24)

OYSTER CONDITIONS IN 1961

Lyle St. Amant

... An Unusual Year

WEATHERWISE and hydrographically, 1961 was a most unusual year. Temperatures were high when they should have been low, and low during months that should have had high temperatures. River stages were high over a long period during the spring and summer. Rainfall was excessive and frequent, resulting in an extremely low salt content in all inside waters which was also evident for several miles offshore.

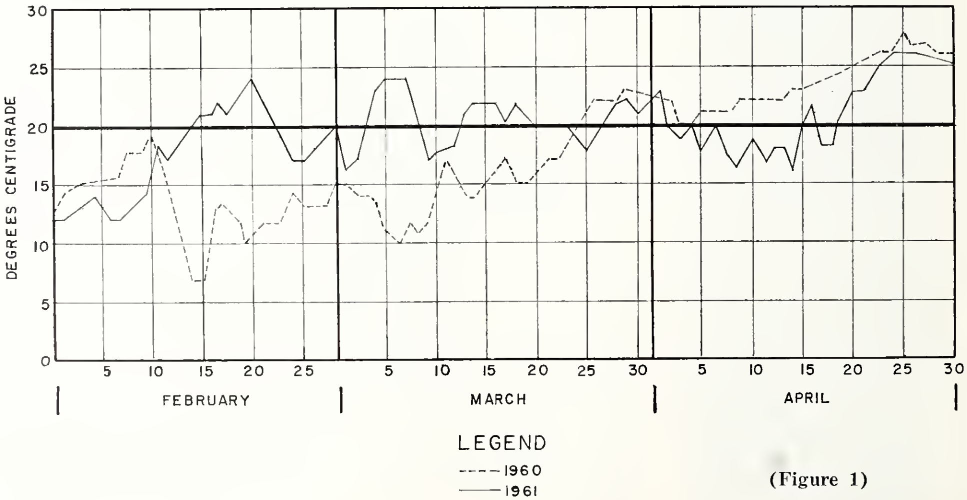
With such unusual conditions existing in 1961, many questions arise concerning current oyster conditions and the impact that such conditions may have on the coming fall and winter harvest. Some of the more important questions involve effects on growth and mortality, setting, couchs and predation, the fungus *Dermacystidium marinum*, and probably most important what can be expected of the fall and winter harvest. An attempt will be made to discuss briefly some of these questions, but first let's take a look at just how unusual conditions were in 1961.

Weather and water conditions

In average or normal years, water temperatures usually range below 20°C. (68° F.) until about the third week in March, after which it rises above 20° C. and continues up into the summer ranges above 25° C. During such years winter conditions occur in most animals while the water is colder than 20° C. i. e. migrating animals such as shrimp and fish remain offshore in deep water and are in a non-breeding condition. Oysters grow well but show no evidence of breeding. As the water temperature exceeds 20° C. animals move into the bays and shallow water and most forms start their annual breeding cycle.

In Fig. 1 are recorded temperatures from Feb. 1 through April 30 for the year 1960-61. It is evident from these data that temperatures in late February and early March of 1961 were well above normal, then by April 1 they began to decline below 20° C. and remained generally low until late in April. This resulted in summer water temperatures being established in the shallow bays in 1961, nearly one month later than in 1960. Furthermore, average temperatures from February 15 to March 20 for 1961 were 7° C. above 1960, and from March 22 to April 25 were 3° C. below the 1960 average. In general, a reversal of normal conditions occurred in 1961 with warm late spring water temperatures occurring in late February and early March fol-

WINTER AND SPRING WATER TEMPERATURES
IN BARATARIA BAY



(Figure 1)

lowed by colder than normal temperatures in late March and April.

The salt content of bays and shallow waters was far below normal during the Spring and Summer of 1961. The deviation from the average normal condition in 1961 was probably as great or greater than that which occurred in the temperature cycle. Salinity profiles of Barataria Bay are shown in Fig. 2. The profile for May 24, 1960 is approximately the normal expected condition, and that which has occurred over the past several years. It is evident from the data that in 1961 salinities were from 8 to 10 parts per thousand below the 1960 condition, and salinities in the northern half of the bay became extremely low, dropping below 5 parts per thousand for long periods of time. Ecologically speaking this is a most unusual condition for the Barataria Bay area, and presented environmental conditions to the animals of the area that were far from normal. The existence of such unusually low salinities can be attributed to extreme rainfall throughout the spring and summer coupled with high river stages.

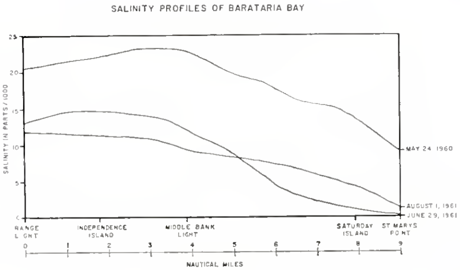
It became evident after considering temperatures and salinities during 1961 that an unusual year has occurred in the normal environment of all of the animals using the shallow bays of the Louisiana coast. Just how much this change has affected the animals is difficult to say with limited data and because other unknown factors may be playing a part in overall production. Nevertheless, it is certain that these conditions did play a part and possibly a large part in causing the low shrimp production for 1961, and it certainly will affect to a considerable extent, oyster conditions. Fortunately, in the case of oysters, any adverse effects of 1961 may be more than off-set by beneficial effects on the over-all oyster industry.

Some expected effects of 1961 ecological conditions on oysters

Because oysters are sessile and never move, and because a great deal is known about the oyster in relation to environmental conditions, it is possible to predict how the oyster will react to changing environmental conditions. Using such existing knowledge coupled with our regular studies and observations of oysters in Louisiana coastal waters, it is possible to evaluate the effect of the unusual environmental conditions occurring in 1961.

Breeding and Setting

Because of colder water conditions in late spring the peak of the oyster breeding and setting was several weeks later than normal. Indications are that the total effective set was less than normal on the more inside seed areas because of unusually low salinity. Studies of Sister Lake and the shell planting area in Black Bay and the Louisiana marshes indicate a much lighter set. This light set, however, does not preclude the possibility of a good fall set, if waters become more salty, and good setting should have occurred on the lower (more out-side) seed areas which, in normal years, are too salty for the set to survive predation from oyster drills.



(Figure 2)

Growth and Mortality

Summer growth on all seed beds and in the shell planting areas was less than normal because of extremely low salinities. Here again, oysters in areas normally too salty for summer survival should have grown well with less mortality as low salinities moved closer to the Gulf. Slow growth on the inside seed beds during periods of low salinities should have no effect on fall growth and production, if salinities rise to normal during the latter part of the year in the fattening areas.

Some mortalities did occur from excessive fresh water in the uppermost regions of the bays but additional survivals in lower bay areas should compensate in overall production.

Predation and disease

Probably the most beneficial effect of the unusual low salinity will be a great reduction in oyster drill population and activity and a reduction in mortalities resulting from the fungus *Dermacystidium marinum*. Summer salinities were so low in the northern half of Barataria Bay that it is improbable that many oyster drills survived. In the lower part of the bay, even into the Gulf, salinities fell below 14 parts per thousand for extended periods which reduced drill activity, curtailed their breeding, and possibly reduced the overall population. Seed and fattening oysters in the lower bay areas should have far less oyster drill predation in the 1961-62 season.

Possibly of even greater significance is a wide spread reduction in evidence of the fungus *D. marinum*, the agent which causes heavy summer mortalities. Since the late summer of 1960, there has been a gradual decline in incidence of the fungus disease and the excessive fresh water has so reduced it that positive identification of the fungus in oyster samples is nil.

Conclusion

It can be said that if fall and winter conditions return to normal and afford good fattening and growth of planted seed, and if the set in 1961 is not too light to furnish adequate seed in 1962, then 1961 can be looked upon as generally beneficial to the oyster industry. ✠

LOUISIANA SEAFOOD

THIS IS THE SEVENTH annual fall promotion of the commercial fishing industry, America's oldest food industry. The Bureau of Commercial Fisheries, U. S. Department of the Interior is again cooperating with the commercial fishing industry through its consumer education program which is designed to encourage the greater use of fresh, frozen, cured and canned fish and shellfish. The Bureau is issuing special marketing releases to schools, institutions, restaurants, food trade groups, newspapers, radio and television. Cooperation from these groups has been outstanding in past promotions.

The Louisiana Wild Life and Fisheries Commission, through its official publication, the LOUISIANA CONSERVATIONIST, is happy to be able to lend its encouragement and help in promoting Louisiana seafood. Gourmets the world over are well acquainted with the delicious dishes concocted by Louisiana cooks with Louisiana fishes and shell fishes. On these pages are four recipes well worth trying and eating.

Fish and shellfish are nutritious. An average serving of fish or shellfish provides nearly all the animal protein you need each day to help build and repair body tissue. In addition, fish are valuable sources of minerals and also supply essential vitamins. On the fat score, when you compare the fat content of most fish and shellfish with the fat content of most meat, eggs, and milk, other complete protein foods, the fat content of fish is low. The fish fats are relatively rich sources of the polyunsaturated fatty acids, thus making fish and shellfish especially adaptable and useful in the human diet.

Although the flavor, texture, and appearance of the fish and shellfish vary according to their species, the fundamental rules for cooking seafoods are few and easy to follow. All seafoods may be cooked by any of the basic cooking methods of frying, baking, broiling, boiling or steaming or in an endless variety of combination dishes. The most important thing to remember in cooking fish is that it is too often overcooked. Just enough cooking to enable the fish to be flaked easily when tested with a fork will leave the fish moist and tender and bring out its delicate flavor.

BAKED FLOUNDER AMANDINE

2 pounds flounder fillets or other fish fillets, fresh or frozen
¼ cup salad oil, butter or other fat, melted
¼ cup lemon juice
2 teaspoons salt
2 teaspoons paprika
Dash pepper
½ cup blanched, slivered almonds

Thaw frozen fillets and skin if necessary. Cut into serving-size portions. Place fish in a well-greased baking pan, 13 x 9 x 2 inches. Combine fat, lemon juice, salt, paprika, and pepper. Pour over fish. Sprinkle with almonds. Bake in a moderate oven, 350° F., for 20 to 25 minutes or until fish flakes easily when tested with a fork. Remove from oven. Place in a broiler, about 3 inches from source of heat, and broil for 2 to 3 minutes or until brown. Serves 6.

By substituting recipe ingredients such as butter, milk, mayonnaise or French dressing with salad oil, skim milk, and dressings made from the recipes in this book, and by using other ingredients that are allowed on your diet, you can prepare fish and shellfish in many delightful ways.

Iodine, one of the most important food elements, is found in a higher percentage in ocean fish than in most other foods.

Fish and shellfish contain a variety of health-giving minerals. These minerals are essential in the building of tissues, bones and teeth.

The high nutritive quality and digestibility of fish proteins class seafood among the more desirable food products.

Fish within the many marketed varieties gives you a choice of a great diversity of taste treats, and remember, fish fats are those healthful polyunsaturated fats.

Fish supplies nutritionally complete protein for proper body growth and repair, and always many essential vitamins and minerals for your complete body health and vigor.

GOURMET DELIGHT

ELEGANT SHRIMP AND RIPE OLIVE JAMBALAYA

¾ pound cooked, peeled, cleaned shrimp (fresh or frozen)
or
3 (4½-ounce) cans shrimp
1 cup pitted ripe olives
¼ cup chopped bacon
3 tablespoons chopped onion
3 tablespoon chopped green pepper
1 clove garlic, finely chopped
1 tablespoon flour
½ teaspoon salt
½ teaspoon Worcestershire sauce
Dash cayenne pepper
Dash paprika
1 (16-ounce) can tomatoes
2 cups cooked rice

Thaw frozen shrimp or drain canned shrimp. Cut large shrimp in half. Cut ripe olives in halves or large wedges. Fry bacon until crisp. Add onion, green pepper and garlic; cook until tender. Blend in flour and seasonings; add olives and tomatoes and cook until thick, stirring constantly. Stir in rice and shrimp; heat. Serves 6.

CRAB MEAT STUFFED PEPPERS

1 pound crab meat
6 green peppers
1 cup boiling water
1 teaspoon salt
½ cup mayonnaise or salad dressing
2 hard-cooked eggs, chopped
¼ cup grated onion
¼ cup chili sauce
2 tablespoons lime juice
Dash Worcestershire sauce
Dash tabasco
¼ cup warm chili sauce

Remove any shell or cartilage from crab meat. Cut stem ends from peppers and remove seeds and membrane. Wash peppers; cook in boiling salted water for 4 to 5 minutes. Drain. Combine remaining ingredients except warm chili sauce; mix well. Fill peppers. Place in a well-greased, round baking dish, 8 x 1 inch. Bake in a hot oven, 425°F., for 20 to 25 minutes or until brown. Garnish each pepper with approximately 2 teaspoons chili sauce. Serves 6.

OYSTER CLUB SANDWICHES

1 pint large oysters
12 slices bacon
1 egg, beaten
2 tablespoons milk
½ teaspoon salt
Dash pepper
1 cup flour
1 cup dry bread crumbs
¼ cup mayonnaise or salad dressing
6 lettuce leaves
2 tomatoes, sliced
18 slices buttered toast

Drain oysters. Remove any pieces of shell from oysters. Fry bacon. Drain on absorbent paper. Combine egg, milk, and seasonings. Combine flour and crumbs. Roll oysters in flour-and-crumb mixture. Dip in egg mixture and roll in flour-and-crumb mixture. Fry in hot bacon fat. When oysters are brown on one side, turn carefully and brown the other side. Cooking time approximately 5 minutes. Drain on absorbent paper. Spread 6 slices of toast with mayonnaise. Arrange lettuce and tomatoes on top. Cover with 6 slices of toast. Arrange bacon and oysters on top. Cover with remaining slices of toast. Fasten sandwiches together with tooth picks. Cut into quarters. Serves 6.

Letters... Questions... Answers... about WILDLIFE *in* LOUISIANA

conducted by Steve Harmon

Dear Editor: Bunkie, La.

Enclosed is a picture of my 12 year old son with a bass he caught in the lake near our home. His name is Buster Bain and his fish weighed 5¾ pounds. It was caught in July, 1961 in Bongarcon Lake.

I would like for you to print this in the LOUISIANA CONSERVATIONIST if possible.

MRS. STERLING C. BAIN

Dear Editor: Hammond, La.

In a local newspaper I recently read an article stating that many gravel pits were washing gravel in the Tangipahoa River near Amite. In an article I read a few weeks ago, the conservation department was said to have cleared up the matter of these people washing their gravel in these local rivers. Why is the river still muddy? If the game wardens enforce our game laws, why don't they keep the rivers clean and rid these people of doing such things?

I am sure the pit owners would feel bad if we fishermen would go and pour sand into their gasoline motors. Well, we feel the same way about their muddying up our rivers and fishing waters.

I feel sure that the CONSERVATIONIST will print articles to show how we fishermen feel about such matters and I also feel sure that the matter will be cleared up as soon as possible.

Besides calling your attention to this, I would like to know where I may obtain a large wall map of Louisiana containing all the rivers and waters of the state. I have seen one published by the Department of Public Works, but I do not know where to obtain one. Please tell me where I may get one.

Thank you for the consideration you have given to my letter. Keep up the good work with your excellent publication.

ROBERT FOSTER

The Louisiana Stream Control Commission approved the filing of charges on sand and gravel miners in the Tangipahoa and Amite Rivers in order that these streams may once again be returned to the people as a source of recreational pleasure. The first set of charges were arraigned in District Court, Amite, Louisiana and the trial date has been set. Because of this action, other miners have been calling into the Baton Rouge office, assuring their cooperation in helping to clear these rivers and asking our recommendations as to what could be done to help them out in their dilemma. Unusual high waters this year, especially in the spring, caused many of them to lose holding basins that they had been utilizing over the years.

To the people of Independence, I would like to recommend and strongly urge that you give serious consideration to an impending sewage bond issue so that your town will no longer contribute raw sewage to the Tangipahoa River.

Our division will continue to be active in clearing the Tangipahoa and Amite Rivers of any and all types of pollution.

K. E. Biglane, Chief
Division of Water Pollution
Control

Dear Editor: Lanark Vil., Fla.

While visiting with my good friend, Mr. Otho B. Clark, Supervisor of the Salt Water License Division of the Florida Salt Water Commission in Tallahassee, Florida it was my good fortune to peruse your Wildlife magazine which he had on his desk, though addressed to some one other than he, in the Florida Salt Water Commission.

I thoroughly enjoy my hobby of many years standing, namely Conservation work, and enjoy receiving Conservation magazines of the various states, and your September issue was brim full of keen and interesting items.

I am a member of the Outdoor Writers Association of America, and have held many offices in various Conservation Associations, both local and national in scope.

I would appreciate your putting me on your mailing list for receipt of the LC, and should there be any cost involved, I would gladly pay same.

S. C. SUNDVIK

We are always glad to hear from Outdoor Writers throughout the country and happy to place them on the mailing list of the LOUISIANA CONSERVATIONIST. No charge, Suh!

Dear Editor: New Orleans

Enclosed is a picture of a gar fish that was caught about ¾ mile off shore from my place at Little Woods on a 30 pound test nylon line while fishing for croakers. I was in my skiff alone, and took 41 minutes to land the fish.

CHARLES R. MOREL, SR.

Dear Editor: Bastrop

I am an ardent sportsman, 16 years of age, in the fields of fishing and hunting. I read and am glad to find that someone is backing the people of Morehouse Parish up in the fight to keep Bayou Bartholomew as is.

Arkansas is now dredging sections of Bayou Bartholomew. I fully agree with one of the references Mr. Grits Gresham had in his article and I quote from Judge E. L. Gladney:

"I fear that the drainage project would ruin the fishing and other sports . . . that Bartholomew is the only natural stream in this area that has not been disturbed or ruined."

I sincerely hope the people will realize that what happened to Beouf River will also happen to Bayou Bartholomew if it is dredged.

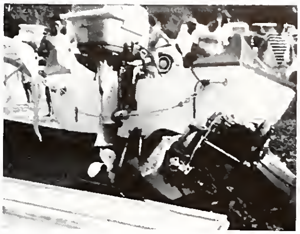
I have spent many hours of enjoyable fishing on Bartholomew. There may be found some of the most wonderful bass and bream fishing as anywhere in Louisiana. Not to mention the fact at times there is also wonderful catfishing on pole or trotline.

I hear my father tell of the same story and his experiences on Beouf River. He spent four years doing nothing but fishing there in West Carroll Parish. He, my Uncle, and Grandfather made a good living during those four years. The lasting memories of that life is all that he has except a clean banked canal.

WAYNE BONNETT

Dear Editor: Baton Rouge, La.

Here is a snap shot of a boat wreck which I took at False River. It happened at Bonaventure's Boat Landing.

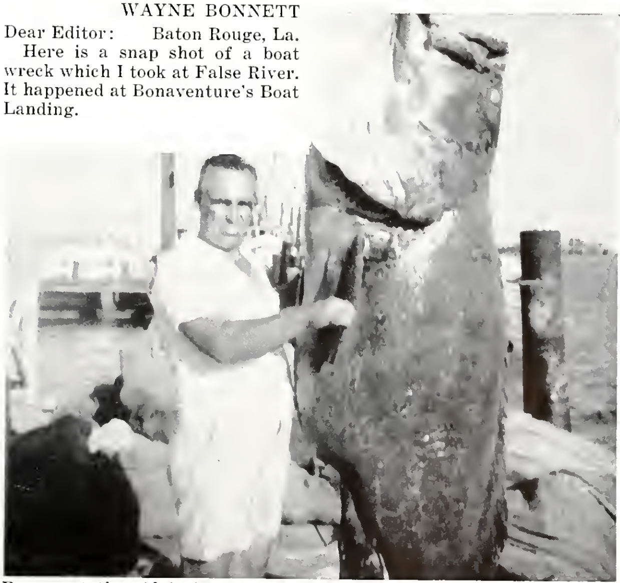


No one was injured. The boat on top was being driven by the man in the background without a shirt on. He was pulling someone on skis, he circled back to pick her up when she fell. He hit another boat's waves and he fell out of his boat. His small son was left in the boat and tried to steer it. He lost control and it came at the landing full speed.

The boy in the striped shirt in the background was holding the rope to his boat, on bottom. It was parked in shallow water at the landing. His mother saw the oncoming boat and told him to let go of the rope and run, he did.

The other boat hit his boat, jumped over it, and landed on the back of it. Witnesses said the little boy hurt his nose and passed out. Otherwise no one was injured.

GORDON LE NOIR JR.



Representative Alvin Dyson of Cameron Parish recently got tired of his North Louisiana colleagues ribbing him about the large bass caught in the hill section of the state. He could resist no longer—out came this photo of a 700 pound bass caught off the coast of Cameron by his good friend Ernest Taber. Dyson says he's heard little from the boys North of Alexandria since the incident.

With Our Commissioners

In this issue, Ray Whatley, member of the Louisiana Wild Life and Fisheries Commission from Alexandria, writes this article about wildlife and natural resources in the area where he lives. A well know sportsman and keen observer, Whatley has firm ideas about the recreational opportunities that exist in the area where he lives. We hope you will enjoy this fifth in a series of articles by our commissioners.

Ray A. Whatley

AS A MEMBER of the Louisiana Wild Life and Fisheries Commission living in Central Louisiana, and Vice-Chairman of the Commission, I would like to write about a section of Louisiana that I feel is blessed most generously with wildlife and natural resources.

The Central Louisiana area about which I write represents a unique part of the State. It could rightfully be described as the heartland of Louisiana because all species of wildlife can be found here in this outdoor paradise.

The terrain is diversified, ranging from velvety cutover pine lands to stands of hardwood forest lands. There are open fields and places that offer dense cover and food for game.

It is easy to compare the area to a compass. Any glance at a map shows that the four compass points are roughly sprawling segments of the Kisatchie National Forest, with Alexandria being the pivot upon which the compass needle swings. You may go North or South, East or West; and there are lands, fields and forests ideally suited to the production of resident game and attraction of migratory game. There are streams that abound in fish; and there is also Catahoula Lake, considered one of the most important waterfowl areas in North America.

There can be little doubt that the area is unique because few sections of Louisiana change so quickly from rolling forest land to fertile fields, all laced together by major rivers and river tributaries.

It has been said that the vast acreage of the Kisatchie National Forest is a reservoir of wildlife resources, a managed buffer against the encroachment of civilization. In some respects, it is like a trust fund from which only a reasonable interest can be drawn.

This may be true, but I am firmly of the opinion that no matter how fortunate this area is in its diversity of wildlife and natural resources; there is no place for smugness and indifference.

There is now, and always will be, a definite need for conservation education among both young and older people alike. It is not the fear of leveling of forests that concerns me, nor careless destruction of habitat.

Instead, I fear most greatly the "do good" projects that can change the face and eventually the ecology of that section of the state in which I live and spend most of my time.

I share one deep-rooted feeling with many of the people of Central Louisiana. When man changes the land use and balance of wildlife of an area, people in the rural areas as well as the large towns and cities of the area call upon the Louisiana Wild Life and Fisheries Commission to "do something" corrective. This could be called the cure instead of preventive action.

Too many people who do not know, or do not care until it is too late, feel that those engaged in wildlife management can pull a rabbit out of a hat. When a multiple balance of land, forests and wildlife has been brought about by Nature over a period of several centuries of increased civilization, there is no magic elixir that can be applied. Nature's help is needed. This help is the curative, and it is our task to see that the way is eased for Nature to go to work.

To speak more plainly, there is an ultimate limit to what man can do to restore wildlife. We can supply suitable habitat, but where land is abused we cannot make a covey of quail occupy that land. We can restock deer but we cannot make a deer herd expand. There are many things which Nature alone is able to do.

It becomes understandable then why I feel so strongly that conservation education is so necessary to evaluate fully the limit of man's ability to restore wildlife; and to fully appreciate the role played by Nature in the continued abundance of wildlife and wildlife resources.

It is highly satisfying to live in a region where wildlife is abundant; but there is never a day that passes without a deeper realization that the balance between man and bountiful wildlife is as delicate as the workings of a fine watch. ✠

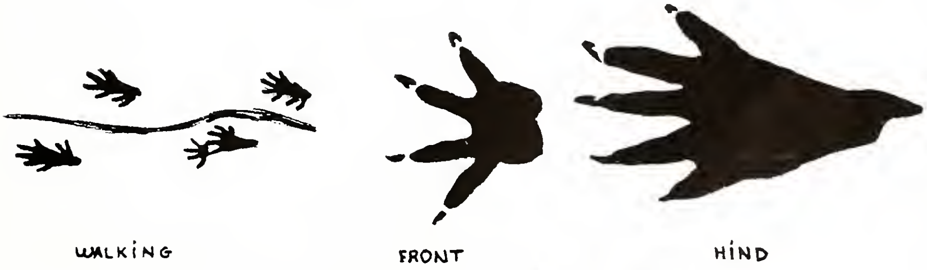
Louisiana Wildlife

MUSKRAT *Ondatra zibethicus*

A common inhabitant of Louisiana's marshes. A very valuable fur-bearer lives in both salt and freshwater marshes. Size ranges from 16 to 25¼ inches. Voice consists of squeaks, squeals, snarls and moans. Most active at night. Swim at 2-3 mph. The food consists of rootstocks and stems of cattails, roseau cane shoots, crabs and crayfish, ribbed-mussels, some small fish.

The animal enters the nest from under the water. The muskrat carries its nesting material in its mouth.

A pile of half-dead vegetation composed of muddy roots, stems, and grasses of marsh plants.



The hindfoot's size ranges from 2½ to 3-5/8 inches. When walking leaves a tail mark.

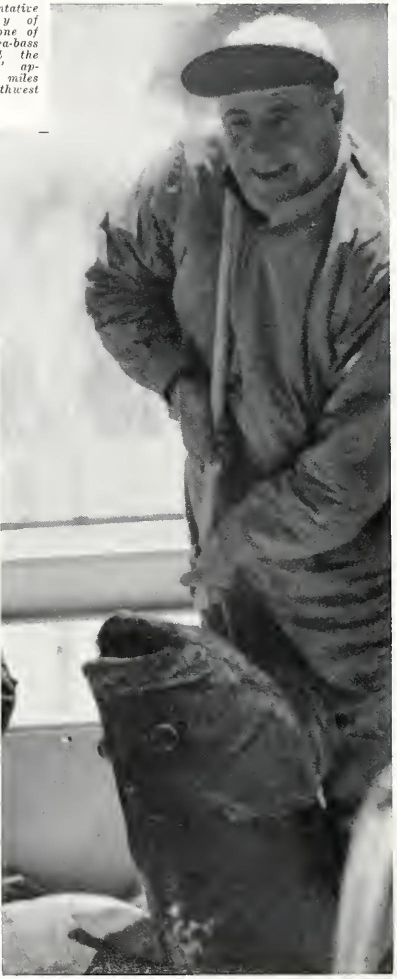
Scrapbook

Sidney Gauthreaux

"We Got So Many Fish. . . . We Like to Sank the Boat. . . ."

Dr. Albert Morgan

(As told to Alden Sonnier, Outdoor Editor, KSIG Radio)



State Representative Jerry Ashley of Crowley with one of the giant sea-bass caught aboard the "Miss Myra" approximately 80 miles out of Southwest Pass.

I NEVER THOUGHT I'd see the day when we had to stop catching fish because we were afraid we'd sink the boat . . . but that most cherished dream of all members of the fishing fraternity actually happened to myself and a party of friends on my boat, the "Miss Myra," on Easter Sunday, 1961, in the Gulf of Mexico.

Before anyone starts doubting this "fish story," let me hasten to assure any doubting Thomases that this was actually the case, because you can't put over a thousand pounds of fish on a boat with four big men without giving some thought to your load problem, especially when you're running two gasoline engines and you're 70 miles from shore.

And, besides myself (I weigh 204 pounds), we had on board; State Representative Jerry S. Ashley, a husky 240-pounder; Clyde (Shoestring) Martin, our captain, who despite his nickname is far from being shoestringsized, and my good "Man Friday," George Grace, a good-sized man himself. Add to this passenger-load our ice-boxes and gear, plus seven giant black sea-bass totaling over a thousand pounds, then you know what I mean when we say we were afraid we might sink the boat. And these seven fish were boated in about 35 minutes. We think this is some kind of a record and would like to hear from other Gulf fishermen if they've ever heard of or experienced the equal of our feat.

It started off on Friday afternoon, with me working hard in my office in Crowley, trying to get through seeing patients so as to have the week-end off for fishing, champing at the bit because we'd been kept from going out for so long by unfavorable weather and the persistent high winds. By 3 P. M. we were off to Intracoastal City, assured by the weather bureau that small craft warnings would be lowered by 4 P. M. Well, the small craft warnings were lowered, all right, but only to allow the large craft warnings to be raised. We spent the night rocking and rolling in Southwest Pass and when dawn came we saw it was hopeless, so we returned home.

After I had seen about 18 patients that Saturday morning, Captain Shoestring called again at about 12:30 P. M. and fairly shouted over the phone, "Let's go again!" . . . the words I'd been waiting to hear ever since we got back.

With one false start already behind us, we planned to make it "way out" this time, to make a try for red snappers in the deep, blue waters of the Gulf. The weather bureau assured us of good weather for Saturday and Sunday, and despite the fact that it was early Spring, we had high hopes of a good catch because the snappers had been around all winter and there were reports they were still there.

Arriving at the entrance to Vermilion Bay we found it calm, with hardly any waves to amount to anything and decided to go on out Southwest

Pass and reach the rig where we hoped to find our snappers. The Gulf was calm and everything promised to bring us a good day.

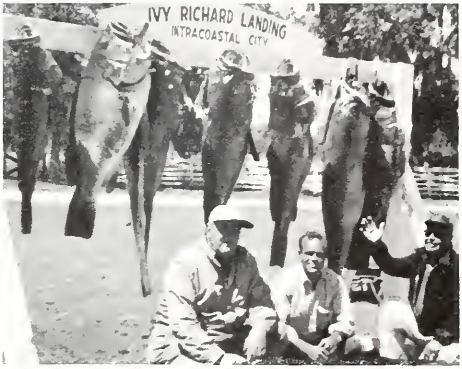
The first problem was bait. Using shrimp, we managed to catch a good supply of white trout, which George began cutting up into strips and chunks of cut-bait. George made sure we had a good supply because when the snappers start biting, bait gets used up plenty fast. Cutting bait is one of George's most important jobs, a list of duties which goes all the way from loading the station wagon, stowing the gear on the boat, making up the snapper-fishing rigs and pouring a bucket of cool sea-water over me when it gets too hot out there under the brassy skies over the Gulf of Mexico.

As we had hoped, the snappers were there. We managed to hook a few on the bottom and also managed to get them up about 15 to 20 feet off the bottom, then "zoom," . . . off they'd go; the pole would bend almost double, the line would part with a "crack" like a rifle shot . . . off would go the entire rig, hook, sinker and about 40 feet of line. After about two hours, this sort of thing can get pretty monotonous, and the supply of white trout cut-bait was dwindling. So were the snapper-rigs. It was time to quit and figure something out. Something big was stealing the snappers as we hooked them.

This we did over supper aboard the "Miss Myra," and we sacked out for a good night's sleep, gently rocked by the movement of the untroubled Gulf waters.

Six in the morning brought breakfast and coffee and it was back to fishing for snappers. More lines were snapped, more bait lost, more snapper-rigs taken by the monsters in the deep blue water.

That's when I suggested to Shoestring that we rig up a couple of jewfish lines and try to land some of those robbers. He baited one line and began letting it down. Before the heavy sinker reached bottom, Shoestring let out a loud "Oomph," and hollered for George to give him a hand. Together they hauled up a 75-pound black sea-bass or jewfish, destined to be our smallest. The next time the line went down it was baited with the only snapper we had managed to land, a 5-or 6-pounder. It had no more than reached bottom when Shoestring hollered for George again and up came our largest fish of the day, a 217-pounder. We repeated the same procedure a few more times and at the end of 35 minutes we had seven of these monsters on deck for a total of more than a thousand pounds of fish. That's when we decided the boat had her load. ✠



Three Crowley fishermen beam with pleasure as they show the seven giant black sea-bass or jewfish they landed in the Gulf 70 miles out of Vermilion Bay's Southwest Pass on Easter Sunday. They are (left to right) State Rep. Jerry Ashley, Clyde (Shoestring) Martin and Dr. Albert R. Morgan. Largest fish was 217-pounder, smallest 75-pounder. Total weight better than 1,000 pounds, and all caught within 35 minutes when they began stealing red snappers the party hooked.

The "Miss Myra" of Crowley takes on fuel for her twin engines at Ivy Richard's landing, Intracoastal City, before leaving for the offshore oil rigs in the search for red snappers that wound up with what may be a record catch of 1,000 pounds of jewfish in 35 minutes.

Deer Parasite Survey In Louisiana

As part of a regional parasite survey, eleven deer from Madison and Tensas parishes were autopsied recently in a special field investigation conducted by Dr. Frank Hayes and staff members of the Southeastern Cooperative Wildlife Disease Study.

Deer Study Leader Dan Dennett, whose research activities include this type of work, organized the special post-mortem examinations and demonstrations August 22-24. The majority of the technical personnel of the Pittman-Robertson (Game) Section of the Fish and Game Division of the Louisiana Wild Life and Fisheries Commission, as well as representatives from Tennessee and Mississippi attended.

In addition to Dr. Hayes, who is in charge of the study, staff members included Dr. Theodore R. Ridgeway, field veterinarian; Charlie M. Marshall, field biologist, Jim Smith, biological aide, and an experienced photographer from the School of Veterinary Medicine, University of Georgia, Dr. H. C. Morgan, who brought special equipment along to assist in making a complete record of the entire procedure and the parasites discovered during the autopsies.

Dr. Hayes stated that the primary purpose of the survey was to determine the effects that parasitism apparently has on the health and well being of the deer herds throughout the Southeast.

"Parasitism certainly does seem to be one of the limiting factors, as much so as the food supply, and it must be considered along with it in any population study," he said. "It is one phase of the deer problem that has never been investigated in this region. In fact, numerous parasites are being found that have never been reported from the Southeast.

Preliminary research on parasites begins in the field. Here, a team of researchers are shown examining the carcass of a deer. From left to right are: Dr. Ted Ridgeway, University of Georgia; Larry Soileau; John Haygood and J. B. Kidd.

Research and scientific photography in the laboratory follows field work. Dr. H. C. Morgan and Dr. Frank A. Hayes, both of the University of Georgia, are shown photographing parasites for future isolation, identification and study.

"Regarding the deer in Madison and Tensas parishes, in view of the tremendous food supply available, evaluating the situation in terms of browse lines may be misleading," he said. "Judging on that basis I really did not think that there were nearly as many deer as the biologists implied but when we took our material back to the Laboratory in Athens, Georgia, our findings have certainly confirmed the Fish and Game Division's opinion on the large herd of deer that was present.

"We found many parasites, more than I had anticipated, from that area, which to us, is indicative of extremely heavily populated areas. In fact thus far our record is in excess of 10,000 stomach worms in a single animal. This record comes from Madison parish, Louisiana.

"You may wonder how these findings are useful in game management? The theory on which we are working is not original. It has been borrowed from live stock study, in that it is an accepted fact that the more animals in a pasture, for example, the heavier the parasite burden will be. We are attempting to apply that to deer and hope when the survey is over it will have some correlation between the degree and intensity of parasitism infection in the population of each given herd of deer."

He said a parasitism index might serve usefully to determine the number of deer in an area and their general condition.

"As you know we are paralleling this with our infected live stock animals and we have good indications now that a definite correlation exists between the amount of fat within the marrow of the femur and the number of parasites present in an animal. It is considered that such might evolve into a very significant tool for management practices in the future.

"There are various theories on how many acres of land are required to support one deer," he said. "It depends entirely on the carrying capacity of the area, which in turn, is governed by many factors including physiographic problems. Dr. Hayes stated the condition of the animal is really what researchers sought. How many animals are on a given area; how well they are suited to the area; the support of an animal in each particular area is our primary interest," he said. "We think that some day in the future, when enough information has been acquired on the parasite picture, that it will serve as an indirect index to the status of that particular herd. For example, speaking from a theoretical standpoint, where the herd of deer is in balance with the range conditions; let us say in equilibrium, where there are an appropriate number of animals, the parasite hardly exists.

"We do not expect anything else from our limited experiences thus far as we have not found parasitism to be any problem. We have examined animals and found that parasites were few and far between. The greater number of animals in an area, the greater number of parasites, and we are striving to compile valid data to demonstrate the concept which has been shown in livestock for the past 3 or 4 decades. That is an accepted fact in the livestock industry and there is no reason it should not partially apply where deer management is concerned, but it has to be performed.

"We also in the future, hope to evaluate certain types of food patch programs, and the effects, good or bad, whichever it might be, upon deer herds. There is a tendency which food patches exert, crowding deer into an area, bringing them into small plots, thus increasing their exposure to parasitic infections. That just might be something that needs research. We are not claiming this one way or another.

"The question has been asked, how will the results of the survey, after its completion and all the information made available to the respective state game management department, help the public, the game animals and deer hunting in general?" Dr. Hayes boiled it down to one simple sentence: "It will enable the various game departments to provide more deer for more sportsmen and thus afford more of this fine recreation for the general public." ✠

The Trumpeter Swan

The trumpeter swan was formerly, perhaps, a fairly common winter resident, at least in the Gulf Coast region, of Louisiana. However, it no longer occurs in the state. This magnificent bird is one of the largest and rarest of all North American birds. Once thought on the verge of extinction, it has been saved by rigid protection. Since the trumpeter swans require almost complete solitude in their breeding grounds, as more and more areas of the Northwest were settled by man, the farther back these birds retreated. It is believed that there are now no more than 600 of these birds left in the entire world. ✠

DUCK-BANDING TRIP REPORT

THE 1961 annual duck-banding trip to Canada was made by District III Biologist Palermo this past summer. Palermo was assigned to work with a drive crew in the east-central part of the province of Alberta, Canada and worked in that area from July 8 to August 11.

The primary objective was to band young diving ducks, especially canvasback, redhead, and scaup.

He reported that conditions in the southern half of the provinces of Manitoba, Saskatchewan, and Alberta were extremely dry and that a very large number of the productive potholes were bone-dry. Past observers estimate that duck production in this important duck breeding area could have possibly been down by as much as 75 to 90 percent. This area, Palermo pointed out, is the most important breeding area as far as puddle ducks (mallards and pintails) are concerned.

Conditions in the northern parts of the duck-producing provinces were much more favorable. Water areas were plentiful, water levels were sufficiently high and ducks were numerous. Palermo believes that many of the ducks that were found in these northern areas were ducks that normally breed farther south but were forced to move north in search of water. He commented that when such a condition exists the number of broods as well as the average brood size decreases resulting in a decrease in the total production.

As Palermo saw it the canvasback and redhead production was poor, the mallard, pintail, and teal production was poor to fair, the gadwall, widgeon, and shoveler production was fair, and the scaup production was good to excellent.

Palermo's crew was the top crew in Canada this year with a total of 8,380 ducks banded. He reported that a total of 25,000 to 30,000 ducks were banded by all crews in Canada this past summer. ✠

Pipit Visits Louisiana

The American pipit is a fairly common, but local winter resident of Louisiana, from around October 10 to May 2, casually to June 10 in most of Louisiana. The food of this bird consists largely of insects, crustaceans, and mollusks, together with some wild berries and seeds. Some of the insects consumed, such as the cotton boll weevil, are injurious to crops.

———O———

When you get that funny buzz-buzzing in your ears, it doesn't mean you're losing your mind—not if you're a camper. What it probably means is that an insect has flown into your ear. How do you get him out? Easy! Just shine a bright light close to the inhabited side of your noggin and the bug will come flying out again to see what's up.

Joe L. Herring

Wildlife Education

Photos by The Author

A PROGRESSIVE and successful business in this scientific age depends largely upon research and development. Profit making organizations spend millions of dollars each year in improving or developing better products. As one company's motto "Progress is Our Most Important Product", stands out to let the public know that they are striving for better equipment and materials for the public use.

The general public accepts advancements in science and new products without too much opposition. The majority of this public has not been exposed to the technique of manufacturing the products and the development of sciences and are only capable of doubting the results after a trial and error period. As an executive of one of America's leading industries once said "only five percent of our company's research pays off, but it is that five percent that keeps us in business."

Such is the case with wildlife research and development. Without the various phases of your Louisiana Wild Life and Fisheries Commission a successful product could not be manufactured because of a missing link. Each Division, Enforcement, Refuge, Game and Fish, Fur, Oyster and Waterbottom, Water Pollution Control, and Information and Education, play their role in putting together your product "WILDLIFE". Each division has a working part to carry out and as the various divisions with their well trained technicians and field personnel carry out their general duties, it is the responsibility of the Information and Education Division to bring these developments and activities to you.

Your wildlife Youth Education program is based on bringing factual information and progress to school classrooms throughout the State. It is a well established fact that the good sportsmen and citizens who will use our natural resources wisely and manage these valuable assets for future generations are those who are taught as embryonic sportsmen. They are the children who will take over where we leave off.

The gap left by school summer vacations was quickly absorbed by the Commission Wild Life Lecturers in summer camp activities, Wildlife, Garden and Civic Clubs.

Summer camps such as Scouts, both Boys and Girls, 4-H Clubs, Crippled Children's Clubs and others received programs from Wildlife Lecturers. During June and July, 51 programs were presented to such groups. Attendance at these programs was 3,792.

We receive in our office several hundred requests each week for information. Requests are for information pertaining to Commission Activities, information on various wildlife species and various types of projects that individuals or groups may participate in for a better understanding of conservation problems.

Recently, more letters and verbal requests have been from Wildlife Clubs and Scout Leaders wishing for assistance and suggestions for such projects.

The answer to many of these problems may be found in the recently published book, **Things To Do In Science and Conservation,** by Byron Ashbaugh and Muriel Beuschlein, sponsored by the Conservation Education Association. **Things To Do In Science and Conservation** is described as "an effort to overcome some of the obstacles encountered by teachers in presenting this important topic."

Our present over-all stewardship of natural resources is poor. Too few of us have an understanding of them, of their relations to our living standards, or of the necessity for conserving them. Our educational process has not taught enough about them. If that is not changed, we can expect even greater depletions of the resources. They will be conserved with, and only with, citizen support.

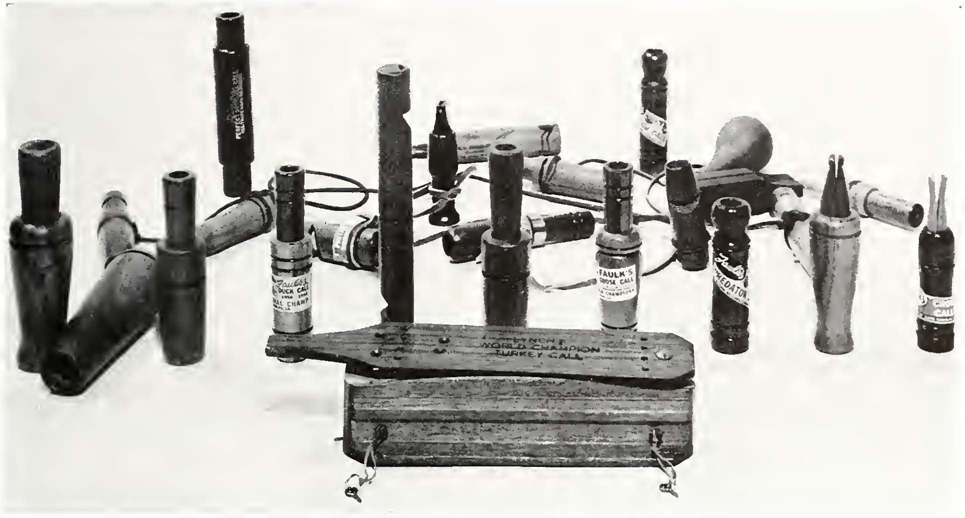
Reptiles are always of great interest at summer camps. Here four girl scouts at Camp Marydale near St. Francisville, observe and study the timber rattler Crotalus horridus *considered by many as North America's most beautiful rattler and the Common water snake or* Natrix sp. *The snakes are made of liquid latex from real specimen thus giving students more of a scientific knowledge of species being observed and handled.*

Each chapter of this worthwhile book presents a basic resource which in turn is considered via several different approaches. Each approach includes a statement of fact or a concept; a practical method for demonstration; projects which can be assigned to individuals or groups; and several questions designed to broaden the student's awareness of the concept and its relation to the overall conservation problem.

This 163 page book is illustrated with many thumbnail sketches. Published by The Interstate Printers and Publishers, 19-27 North Jackson Street, Danville, Illinois, 1960. Price $2.50.

Each month in "Wildlife Education" a suggested book for reading or project purposes will be included.

Boating is a must at summer camps. Wildlife Lecturers will assist in giving instructions for proper boat handling and safety. With Louisiana's new "Boating Laws" handling, equipment, and safety are all very important for boaters on our lakes, ponds and waterways.



CALLING ALL GAME

CALLING GAME is a little like making cherry pies or gaspergou courtbouillon, says veteran outdoorsman Joe Linduska. "Some folks have the touch and some don't. But as with most any skill, it can be developed with practice.

"Take duck calling, for example," says Linduska. "I have a friend in Louisiana who can charm pintails right out of a rice paddy. But here on the Eastern shore of Maryland, I've worn out three whistles on thousands of these same sprig. And what I've brought to bag figures out about one pintail per worn out whistle.

"But last fall my Cajun friend came by and what happened was completely demoralizing. I sat with him one afternoon and watched him talk-down several flights to where you could have 'filled out' with a tennis racket — and using my whistle. Of course, he's been at it for twenty years and, to him, pintail palaver is as natural as French.

"Game calling is a fast growing sport," continued the game expert, "and with a little skill it can add new thrills to any hunt. Whatever the species, bringing it to you, in place of you seeking it out, is a satisfying accomplishment.

"It's hardly what you'd call a new development. The Indians, and possibly more primitive tribes before them, used calls to help put meat in the pot. Of course, the Indians had time for practice and when you're calling for your supper, I expect you could learn to lure in an oyster.

"For the most part, game calls divide themselves into two types — those imitating the voice of the animal called, and those imitating (with a lot of emotion) something they eat. Group one includes calls for ducks, geese, turkeys, squirrels, deer — in general, the edible species — except crows. The second type appeals mainly to predators, such as foxes, wolves, coyotes, bobcats, raccoons and other meat eaters. Most of these calls imitate a screaming rabbit in a whole lot of trouble, or a mouse or other small mammal squeaking in distress.

"In learning how to handle a call, there's no substitute for instruction by a successful caller — *and* practice. If you don't have a local pied piper to get you started, then follow the recommendations of manufacturers. They're in business to sell calls and you can be sure no secrets to successful calling are withheld. Records of actual voices, or calls by experts, are available, too. These are helpful for purposes of practice or they can be played directly on the hunting stand using a portable record player. But not for waterfowl — such recordings are unlawful for the taking of ducks and geese.

"Predator calling is catching on in many areas and the results often are spectacular. When everything is right, it's not uncommon for a fox or coyote to approach within a few yards. As for 'when things are right,' two Minnesota biologists attempted to evaluate various factors bearing on the success of calling foxes. Here are some things they learned from 401 attempts which brought up 73 foxes:

"One in four foxes came within three minutes of calling and three of four came within ten minutes. Consequently, about fifteen minutes at any one location would seem to be enough.

"Three-fourths of the animals approached within fifty yards and half came within fifty feet. Success was slightly better when calling was done from a tree blind or a car. And all of several commercial reed calls tested seemed equally effective. For close work a rubber squeeze bulb producing a sharp squeak was useful. It brought animals in closer after they refused to venture nearer to a reed call.

"As for the best time to call, the biologists obtained the greatest response after dark. The three hours before nightfall were good also, and the deadest part of the day was early morning.

"Wind had an appreciable effect on success and response was highest when it was calm and it declined rapidly with increasing velocity of wind. Results were better on a rising or steady barometer than when barometric pressure was falling.

"Other considerations important to success are: select a hiding spot on high ground with good visibility in all directions; sneak into the area so you'll not be spotted making your approach and remain motionless. It's more important than good concealment." ✠

CANEBRAKE EXHIBIT

(Continued from page 9)

some 36 alive today. The prairie chicken has not been observed in Louisiana since 1925.

The other exhibit of the series shows huge trees as they formerly grew in Louisiana. The striking feature of this scene is the fact that not just a few but a great many of the trees previously grew to enormous height and size. In the midst of the gigantic trees is the Ivory-billed woodpecker, which is now extinct.

Sizable remnants of this giant virgin forest remained in Madison Parish until 1943 when the cutting of the trees was completed. The Ivory-billed woodpecker, which depended upon the natural dying of the trees for its food supply, vanished soon after.

Dense canebrakes, identical to that depicted in the new exhibit, covered much of the area of 18 states during the early history of the United States and were the habitat of bears, wolves, panthers, wildcats and turkeys.

According to early accounts, the cane grew up to 40 feet in height and was sometimes as thick as a man's arm. It is said that the canebrakes were so dense that a man could travel no more than three miles a day through them.

Marquette, the French explorer, wrote in 1693 that buffalo had a difficult time crossing through the cane because of its thick growth. A fictionalized biography of Jim Bowie told of a cannibalistic tribe of Indians who lived in a large canebrake near the Louisiana-Texas border and attacked travelers who passed by the area.

The canebrakes also served as a haven for horse thieves and runaway slaves, according to the naturalist Audubon, and are believed to have been the favorite hunting grounds of the Indians. ✠

Companionship—At Last!

When God gave me a little boy
I vowed that I'd ensure,
His every need and every want
And make his life secure.

I set a pace that left no time
For idleness or wishing,
No foolish squander of my time
On wasteful things like fishing.

I felt quite proud of my results
Until one day he spurned,
My latest gift, a brand new bike
Stood as I placed it, wheels unturned.

I searched for him until I found
Him sitting by the brook,
Passing time with an ill-dressed man
And baiting up a hook.

I listened quietly as he spoke
"Hey Dad, you have a bite.
Gee, this is ever so much fun
To have you here tonight."

My puzzled heart turned cold inside;
Had someone filled my place?
I took another look to find
The stranger had no face.

The boy had propped my fishing hat
And coat upon a pole,
To take my place upon the bank
Of the old fishing hole.

I grieved to think that I had been
Replaced by apparition.
Then and there I learned the truth
'Bout boys and dads and fishing.

I took my place beside the boy,
My heart welled up with shame.
"I'm sorry that I'm late," I said,
"I've no one else to blame."

I donned the shapeless hat and coat
And felt relieved to find,
They fit a man who'd just grown up
In stature and in mind.

"I hope you haven't caught them all."
He looked at me with glee.
"No dad, I've always put them back.
'Til you could fish with me."

—Day Yeager
Pennsylvania Angler.
August 1961

The Bird of the month

Charles Shaw

BROWN THRASHER

Toxostoma rufum

THE BROWN THRASHER, often erroneously called "brown thrush" is a common permanent resident of Louisiana although of course in winter the population is greatly increased by migrant birds from further north. This bird is one of the "Mimic Thrushes" along with the Mockingbird and Catbird which it resembles in size and shape if not in coloration. The back has a rich brown color but it can be differentiated from the true thrushes because the dusky markings on the buffy underparts are streaked instead of spotted, the tail is much longer and it possesses wing-bars and the eye is yellow. In size, shape and song it closely resembles its relative although instead of a continuous melody its song may be broken into segments of two or three notes separated by a slight pause. With the coming of fall this song becomes more noticeable throughout the woodlands, although the bird itself prefers to stay in or close to fairly good cover most of the time.

The rather bulky nest may be located in thickets or shrubbery around the home, as the brown thrasher, although somewhat more secretive than the mockingbird, does not seem adverse to staying near human habitation. The eggs may vary a bit in color but have brownish spots or splotches on a lighter background and may number from three to six. The old birds seem to be omniverous feeders but especially during the time when they are raising their family will manage to pick up a great many insects of various kinds to provide the needed protein diet for growing birds. As might be expected these are beneficial birds and are generally welcomed around the homes they choose to honor with their presence. ✤

Reward For Hours Of Patient Waiting

Tagging A Deer

There is probably no greater reward for a deer hunter than tagging a buck. During the past several years more Louisiana sportsmen have taken up deer hunting. In some areas of the State deer are abundant. In other areas deer herds are steadily being replenished by sound management and restocking programs.